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Covid-19 Psychomental and Socio-Behavioural Effects on Patients and Health Professionals at Laquintinie Referral Hospital, Douala, Cameroon

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Summary

COVID-19 pandemic remains a major public health and global health problem. It continues to have significant effects at different levels, and poses a significant threat to mental health. A cross-sectional analytical study on the influence of COVID-19 on the psycho-mental health of health professionals and patients was carried out at Laquintinie Hospital in Douala during a period of 08 months from January 2021 to August 2021. Using the modified and pre-tested form of the Hospital Anxiety and Depression Scale (HADS), we collected data according to the WHO guide to psycho-mental health. A questionnaire was implemented to assess the contribution of anxiety and depressive symptoms. After informed consent, a group of 500 people was interviewed, including 158 health workers and 342 patients. The results show a high rate of anxiety, depression and stress (17.3%; 29.63% and 47.57%) respectively among health workers and a rate of anxiety, depression and stress (7.84%; 9.85% and 15.74%) respectively in patients. There is a high susceptibility to depression in subjects aged 51 years and over [OR (95% CI) 2.16 (1.18-3.96), P = 0.012], and a high susceptibility to anxiety over the department of medicine [OR (95% CI) 3.73 (1.40-9.92) P = 0.005]; Have been associated risk factors in patients. On the other hand, among health professional, males were more likely to be stressed [OR (95% CI) 2.04 (1.81-4.71), P = 0.022], married men [OR (95% CI) %) 1.46 (1.31-1.62) P = 0.034] and the department of medicine [OR (95% CI) 5.73 (1.29-24.4) P = 0.011] had a higher risk of have depression; in addition, the emergency-anesthesia and resuscitation department were at greater risk for anxiety. In addition, correlation analyses showed a statistically significant link between professional and anxiety, lack of water, disinfectant points and suicide in health structures, respectively (P = 0.036 ; P = 0.010).There was a statistically significant rela-

tionship between depression and lack of social and mental support programs from those around him (P = 0.05); stress and the onset of COVID-19 in Cameroon, (P = 0.000). The establishment of a system of advice, assistance and / or specialized psycho-mental health support in all district hospitals in Douala and its surroundings in the context of current and post pandemic.

Keywords: COVID-19; Depression; Anxiety; Mental Health; HADS; Health Professionals; Patients; Cameroon

Introduction

COVID-19 pandemic exposed local, regional and global health system vulnerabilities and weaknesses. The mental health neglected has had a profound socioeconomic and health impact in several ways. COVID-19 has shown, more than ever, to what extent mental health is an integral part of health and well-being and must be an essential part of health services during health emergencies [1].The death rate and the risk of contagion have turned out to be much higher than expected. The caregivers faced a poorly understood and fatal disease, and also were very distressed to contract this disease and pass it on to their loved ones [2].The health and economic consequences of the epidemic are glaring, but this crisis is also having psychological repercussions on the affected populations. More difficult to demonstrate, but no less important, these consequences on the psycho--mental and socio-behavioural health of populations are of increasing concern to professionals. Despite the fact that COVID-19 is one of the first coronavirus infections to be the subject of mental health studies, it was quickly brought under control, and had significant health, psychological and social consequences [3]. Chua et al., showed that the immediate psychological sequelae of COVID-19 involved a significantly higher stress level in affected individuals, when compared to match healthy controls [4].Lee et al., Have reported the presence of episodes of acute psychosis in a few SARS patients [5].

Recent studies on COVID-19 show that it is more deadly and more invasive than SARS of 2002, both healthy and psychologically. This underlines its significant impact on psychological health. In a study, Lai and his colleagues assessed the effects of SARS on the mental health of healthcare professionals in China in 2003. The results reveal a considerable proportion of participants who reported symptoms of depression (50.4%), anxiety (44.6%) and distress (71.5%).These data suggest that healthcare workers, on the front line of the response to the disease, are severely strained psychologically and may develop significant psychological distress, which is the source of a potentially disabling anxious experience [6].Although there is little data on how the new coronavirus is worsening mental health problems on the African continent. A survey of 12,000 women in low-income communities in Uganda and Zambia found increased persistent stress, anxiety and depression, as well long term psychmental and behavioural effects on professional, survivors and populations [7].

However, in the agenda of human development in Africa, less than 10% of the population has access to mental health care. A problem amplified by the lack of mental specialists and social protection support coupled with limited qualified human resource. It has been noted that, the majority of African countries have one psychiatrist per 500,000 inhabitants, instead of one psychiatrist per 5,000 people in accordance with WHO recommendations [8].

The Hospital Anxiety and Depression Scale (HADS) can be used as a powerful tool to assess anxiety and depressive symptoms using a pre-structured and tested questionnaire sent to professional groups in the 10 regions of the country, prior to their informed consent. A recent study conducted on 331 healthcare professionals interviewed in 2020 showed a 41.8% anxiety and 42.8% depression. There was a higher susceptibility to depression in young subjects (30-39 years). Fear of contamination and fear of death are modulators of depression and anxiety. The anxiety-depression comorbidity in the sample is 14.73%. The prevalence rates of major depressive disorder and adjustment disorder in the sample are 8.2% and 3.3%, respectively in Cameroon [9]. Yet, little is documented on the psychomental and socio-behavioural states and COVID19 pandemic effects on Health workers and patients in Cameroon.

The study was to determine COVID-19 psychomental and socio-behavioural effects on healthcare professionals and patients attending the Laquintinie Hospital in Douala, Cameroon.

Methods

Study Design, Setting and Population

A cross-sectional and analytical study with a prospective aim was conducted at the Laquintinie hospital in Douala from January to August 2021. Our study population consisted of healthcare professionals and patients attending Laquintinie Hospital in Douala who had consented to participate in our study.

Sampling Technique

A non-probability and convenience sampling technique was used for questionnaire administration. This method can be justified based on the mere fact that all health staff and patients attending hospital for care and service delivery during COVID were randomly selected with distinction of and if consented, the research study was verbally explained to each and upon common consensus the questionnaire was administered. The sample size was defined by the Lorentz formula, so a minimum size was 500 Participants.

Data Collection Tools, Procedure and Quality Control

We used a Questionnaire and the modified and pre-tested Hospital Anxiety and Depression Scale (HADS) in accordance with the WHO guide (it comprises 14 items and rated from 0 to 3. From 0-7 normal, from 8-10 moderate, from 11 -14 medium and 15-21 severe [10]. The questions in Even numbers were that of Anxiety and in Odd numbers were that of Depression for this part which is found in the appendix), For the nursing staff and patients attending the various departments of the HLD.

The data collected has been reviewed and verified for consistency and clarity; completeness, and accuracy throughout the data collection process. We distributed this questionnaire to all participants who consented to participate in the survey after a comprehensive dialogue and communication prior administration.

Data Analysis and Statistical Tools

An input mask was mounted on Excel and the data was entered in the same software, then analyzed on SPSS version 23.0. Chi-square and logistic regression tests were performed. We carried out the varied, bi-varied and multivariate analyzes to produce our results. The corresponding confidence interval is 95%. The significance level was at $p < 0.05$.

Ethics Statement

Ethical authorization was obtained from the institutional research ethics committee for human health at the University of Douala and administrative authorization from the director of the Laquintinie hospital in Douala. Written and verbal consent was obtained from each study participant prior to the data collection process. During the data collection process, we informed each study participant about the expected benefits of the research project.

Results

1-Sociodemographic Characteristics of the Study Population

Our study involved a sample of 500 participants including 158 healthcare workers and 342 patients attending the Laquintinie Hospital in Douala. The distribution of the results by sex shows that the female sex was more represented 51.17% than the male sex 43.83% in the patients. The distribution by age groups shows that it is the [18-30 years] who are the most represented of the samples 32.16% in the patients and that of [31-40 years] of 44.94% in the personal health. This study reveals that 38.60% of the respondents were traders; 34.21% of housewives; 14.91% of government; and 12.28% of students for patients (Table I).

On the other hand, among the health professional, nurses represented the majority of 28.75%; 17.09% of physicians; 15.19% of surface technicians and 10.13% of laboratory technicians. The most represented services in the sample were that of the care and services department 82.69% among patients and 100% of the hygiene and sanitation department among health professional (Table 1).

Table 1: Sociodemographic characteristics of the study population (N = 500)

Characteristics	Category	PatientsN=342		Health professional n=158	
		Effectif -N	Percentage (%)	EffectiveN	Percentage(%)
Sex	Female	175	51,17	102	64,56
	Male	167	48,83	56	35,44
Age (years old)	18 – 30	110	32,16	49	31,01
	31 – 40	86	25,15	71	44,94
	41 -50	69	20,18	29	18,35
	>51 years old	77	22,51	9	5,70
Marital status	Single	179	52,34	90	56,96
	Married	144	42,11	66	41,77
	Divorced	9	2,63	2	1,27
	Widowers	10	2,92	0	0
Level of education	University	197	57,60	110	70,06
	Secondary	100	29,24	47	29,93
	Primary	23	6,73	-	-
	Unschooled	22	6,43	-	-
-Profession	Trader, driver, companies	132	38,60		
	Unemployed / household	117	34,21		
	Nurse/Midwife/Caregiver	-	-	91	28,75
	Government, institutions	51	14,91	-	-
	Student	42	12,28	-	-
	Doctor		-	27	17,09
	Surface technician	-	-	24	15,19
	Laboratory technician	-	-	16	10,13
Hospital service	Department of Medicine	122	66,66	61	33,33
	Care and services Department	86	82,69	18	17,31
	Department of surgery and disciplinary	73	79,34	19	20,66
	Hygiene, sanitation and technology department	0	0	26	100
	Department of gynaecology	29	70,73	12	29,27
	Department of laboratory	9	37,5	15	62,5
	Emergency department - anesthesia and reanimation	17	73,91	61	33,33

2- Evaluation of the Socio-Cultural and Anthropological Perceptions of the Respondents

This study shows that 96.2% of healthcare worker respondents said that COVID-19 could cause stress, anxiety and depression in an individual and 3.8% who said it could

not cause. Our findings show that 33.1% of patients took traditional potions and 89.2% of health professional respected the barrier measures. P = 0.001. 29.6% of patients and 31.2% of health workers said that my family is afraid of touching me for fear of being infected. P = 0.038. Accordingly, 12.2% of Patients said they were afraid they would be injected with the COVID-19 vaccine since being hospitalized in this department. As well, 24.3% of health workers responded that they are afraid that all health workers will be forced to take this vaccine or make the vaccination mandatory (P = 0.001) (Table 2).

We also reported that a statistically significant relation between I think this could reduce the number of cases of people infected with Covid and COVID-19 vaccination (P=0.0019)

Table 2: Distribution of participants on socio-cultural and anthropological perceptions

Variable (n, %)		**PatientN=342**	**Health professionalN=158n(%)**	**p-value**
COVID Causes Stress, Anxiety, and Depression in Individuals	Yes	281 (82,2)	152 (96,2)	
	No	61 (17,8)	6 (3,8)	0,000*
2-Barrier measures				
	Patient N=342(%)		Health professionalN=158(%)	p-value
Social distancing of 1,5m	Yes	200(58,5)	91(57,6)	
	No	142(41,5)	67 (42,4)	0,039*
Hand washing with soap and water	Yes	260 (76,0)	117 (74,1)	
	No	82 (24,0)	41(25,9)	0,351
Wearing a mask is compulsory	Yes	240 (70,2)	108 (68,4)	
	No	102 (29,8)	50 (31,6)	0,452
Use a disposable tissue after each usage	Yes	72 (21,1)	46(29,1)	
	No	270 (78.9)	50(70,9)	0,774
Wearing personal protective equipment(PPE)	Yes	45 (13,2)	46(29,1)	
	No	297 (86,8)	112 (70,1)	0,000*
Sneeze on the elbow of the hand	Yes	55 (16,1)	59 (37,3)	
	No	287(83,9)	99 (62,7)	0,001*
Disinfect hands before and after any contact with people or objects	Yes	240 (70,2)	104 (65,8)	
	No	102 (29,8)	54(34,2)	0,422
	PatientN=342 (%)		Health ProfessionalN=158 (%)	p-value
While taking hot drinks	Yes	258(75,4)	122 (75,4)	
	No	84(24,6)	36 (24,6)	0,419
By respecting the barrier measures	Yes	215 (63,4)	141 (89,2)	
	No	127 (36,6)	17(10,8)	0,302
By taking traditional potions	Yes	113 (33,1)	54 (33,8)	

	No	229 (66,9)	104 (66,2)	0,001*
Did not take any barrier measures	Yes No	38 (10,9) 304 (89,1)	2(1,3) 156(98,7)	0,141
4- Behavior of those around you after leaving work				
They are afraid that I infect the whole neighborhood		47(12,9)	32 (20,1)	1
My family is afraid of touching me for fear of being infected		100(29,6)	49(31,2)	0,038*
Everyone consider me as before		195(58,5)	77(48,7)	0,053
5- Reaction to the advent of the COVID vaccine and vaccination campaigns roll out				
I am afraid that I will be injected with this since I was hospitalized in this department		39(12,2)	8(4,6)	1
I'm afraid that all health workers will be forced to take this vaccine		17(5,0)	37(24,3)	0,001*
I get depressed thinking about the side effects of this vaccine		16(4,7)	6(3,8)	0,243
I think this could reduce the number of cases of people infected with Covid		128(38,4)	64(41,2)	0,019*
I get stressed out when I think about the side effects of this vaccine and vaccination		139(40,7)	43(27,1)	0,221

3- Treatment of COVID Patients with Psycho-mental Disorders

Only 14.9% of respondents from the medical department said they administered the COVID Protocol and psychiatric follow-up. P = 0.001. COVID Protocol + Psychiatric follow-up was strictly adherence and respect to biosafety guidelines, standard clinical and laboratories operating procedures including environmental protective measures by all staff and COVID-19 patients and visitors in all departments in referral hospital) (P=0.00). Whereas the referral isolation and followed by psychiatry was not statistically significant in all those units (Table 3).

T**able 3:** Distribution of respondents on the treatment of covid19 patients who present a mental disorder according to hospital service (question reserved only for healthcare professional)

	Department of Medicinen(%)	Department of emergencies-anesthesia and reanimationn(%)	Department of care and servicesn(%)	Department of Gynecologyn(%)	Department of Surgery and Disciplinaryn(%)	Department of Hygiene, Sanitation and Technologyn(%)	Laboratory departmentn(%)	p-value
No answer	137(74,9)	19(82,6)	100(96,2)	33(80,5)	74(92,5)	42(93,3)	23(95,8)	0,541
COVID Protocol + Psychiatric follow-up	24(14,9)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0,001*
Referral to Isolation + followed by psychiatry	22(11,6)	4(17,2)	4(3,8)	7(17)	6(7,7)	3(6,7)	1(4,2)	0,115

3- Factors Associated with Anxiety and Depression Rates Among Healthcare Professional and Patients Attending HLD

Our results show us that at the level of COVID-19 severity of respondents on the HADS scale, that when one considers the degree of severity of anxiety and depressive symptoms, we observe a higher prevalence of moderate

symptoms on the HADS scale. anxiety with 50% and low 50% on depression in patients; then sever00e symptoms on anxiety 30% and moderate on depression with 22% among health workers(Figure 1).

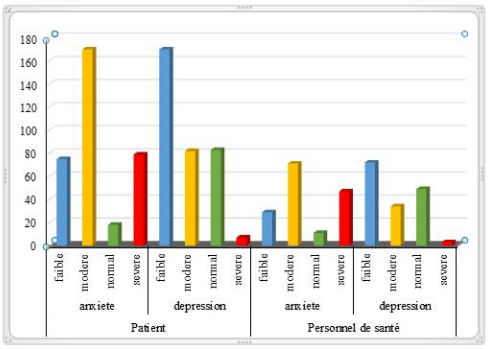

Figure 1: Distribution of respondents by their level of severity of COVID-19 on the HADS scale

5. Rate of Anxiety, Depression and Stress in HLD Patients

The age at 51 years and over, ie 22.2% of respondents (95% CI) 2.16 (1.18-3.96), P = 0.012]; the Department of Medicine or 44% of respondents [OR (95% CI) 3.73 (1.40-9.92) P = 0.005] were factors associated with the risk of depression and anxiety, respectively. Furthermore, respondents presented COVID-19 work related anxiety rate of 7.84%; depression at 9.85% and COVID-19 work related stress at 15.74% (Table 4).

Table 4: Distribution of respondents on the rate of anxiety, depression and stress in patients according to socio-demographic characteristics

	PATIENT											
	ANXIETY				DEPRESSION				STRESS			
	Anxious	Normal	OR (IC95%)	P-value	Depressive	Normal	OR (IC95%)	P-value	No	Yes	OR (IC95%)	P-value
	n(%)	n(%)			n(%)	n(%)			n(%)	n(%)		
Sex												
Female	170(52,5)	5(27,8)	Ref	1	132(51)	43(51,8)	Ref	1	96(52,7)	79(49,4)	Ref	1
Male	154(47,5)	13(72,2)	2,87(1,0-8,23)	0,901	127(49)	40(48,2)	0,97(0,59-1,58)	0,405	86(47,3)	81(50,6)	1,14(0,75-1,75)	0,504
Age												
18 - 30	104(32,1)	6(33,3)	Ref	1	84(32,4)	26(31,3)	Ref	1	68(37,4)	42(26,2)	Ref	1
31 - 40	82(25,3)	4(22,2)	0,84(0,27-2,63)	0,741	57(22)	29(34,9)	1,90(1,11-3,26)	0,503	42(23,1)	44(27,5)	1,26(0,78-2,06)	0,140
41 - 50	66(20,4)	3(16,7)	0,78(0,22-2,78)	0,213	54(20,8)	15(18,1)	0,84(0,44-1,58)	0,578	35(19,2)	34(21,2)	1,13(0,67-1,92)	0,311
51 and a	72(22,2)	5(27,8)	1,34(0,46-3,90)	>0,9	64(24,7)	13(15,7)	2,16(1,18-3,96)	0,012*	37(20,3)	40(25,0)	1,31(0,79-2,17)	0,324
Marital Status												
Single	170(52,5)	9(50)	Ref	1	132(51)	47(56,6)	Ref	1	105(57)	74(46,2)	Ref	1
Divorced	8(2,5)	1(5,6)	2,32(0,28-19,6)	>0,9	5(1,9)	4(4,8)	2,57(0,67-9,81)	0,514	2(1,1)	7(4,4)	4,11(0,84-20,1)	0,121
Married	136(42)	8(44,4)	1 (0,12-7,94)	0,012*	114(44)	30(36,1)	0,68(0,25-1,85)	0,034*	71(39,0)	73(45,6)	0,39(0,14-1,04)	0,241
Widower	10(3,1)	0(0)	0,94(0,92-0,97)	>0,9	8(3,1)	2(2,4)	0,77(0,16-3,72)	>0,9	4(2,2)	6(3,8)	1,73(0,48-6,25)	0,501
Level of education												
Unschooled	21(6,5)	1(5,6)	Ref	1	17(6,6)	5(6)	Ref	1	6(3,3)	16(10,0)	Ref	1
Primairy	21(6,5)	2(11,1)	1,80(0,39-8,37)	0,402	15(5,8)	8(9,6)	1,73(0,71-5,25)	0,315	14(7,7)	9(5,6)	0,71(0,30-1,70)	0,011*
Secondary	96(29,6)	4(22,2)	0,68(0,22-2,11)	0,715	79(30,5)	21(25,3)	0,77(0,44-1,35)	0,302	56(30,8)	44(27,5)	0,85(0,53-1,36)	0,012*
University	186(57,4)	11(61,1)	1,16(0,44-3,08)	0,703	148(57,1)	49(59)	1,08(0,65-1,78)	0,321	106(58)	91(56,9)	0,95(0,62-1,45)	0,013*
Hospital Service												
Laboratory department	9(2,8)	0(0)	Ref	1	7(2,7)	2(2,4)	Ref	1	8(4,4)	1(0,6)	Ref	1

Department of Surgery and Disciplinary	2(0,6)	0(0)	1,25(0,40-3,95)	0,695	2(0,8)	0(0)	1,55(0,85-2,82)	0,148	36(19,8)	28(17,5)	0,86(0,50-1,49)	0,590
Department of Gynecology	60(18,5)	4(22,2)	0,94(0,92-0,97)	0,185	44(17)	20(24,1)	0,33(0,10-1,14)	0,068	13(7,1)	16(10,0)	1,44(0,67-3,10)	0,344
Department of Medicine	29(9)	0(0)	3,73(1,40-9,92)	0,005*	26(10)	3(3,6)	1,16(0,69-1,96)	0,580	51(28,0)	56(35,0)	1,38(0,87-2,19)	0,165
Department of care and services	83(25,6)	3(16,7)	0,58(0,16-2,06)	0,394	65(25,1)	21(25,3)	1,01(0,57-1,78)	0,970	41(22,5)	45(28,1)	1,37(0,83-2,20)	0,234
Department of emergencies-anesthesia and resuscitation	96(29,6)	11(61,1)	0,95(0,92-0,97)	0,319	79(30,5)	28(33,7)	1,75(0,63-4,90)	0.277	10(5,5)	7(4,4)	0,79(0,29-2,12)	0,635
Department of Hygiene, Sanitation and Technology	17(5,2)	11(61,1)	0,87 (0,16-1,12)	0,738	11(4,2)	6(7,2)	0,75(0,71-0,80)	0,422	2(1,1)	0(0)	0,53(0,48-0,59)	0,184

The male sex, i.e 34.7% of the respondents [OR (95% CI) 2.04 (1.81-4.71), P = 0.022] were a factor associated with the risk of stressing; the married or 41.3% [OR (95% CI) 1.46 (1.31-1.62) P = 0.034]; the department of medicine or 9.2% [OR (95% CI) 5.73 (1.29-24.4) P = 0.011] were factors associated with the risk of developing depression; the department of emergencies-anesthesia and reanimation or 38.8% [OR (95% CI) 18 (3.12-103.74) P = 0.000] were a factor associated with the risk of developing anxiety. In addition, our respondents have an anxiety rate of 17.3%; depression at 29.63% and stress at 47.57% (Table 5).

Table 5: Distribution of respondents on the rate of anxiety, depression and stress among health professional according to socio-demographic characteristics

	Health professional											
		Anxiety				**DEPRESSION**				**STRESS**		
	Anxious	**Normal**	**OR (IC95%)**	**P-value**	**Depressive**	**Normal**	**OR (IC95%)**	**P-value**	**No**	**Yes**	**OR (IC95%)**	**P-value**
	n(%)	n(%)			n(%)	n(%)			n(%)	n(%)		
Sex												
Female	96(65,3)	6(54,5)	Ref	1	72(66,1)	30(61,2)	Ref	1	44(53,7)	58(76,3)	Ref	1
Male	51(34,7)	5(45,5)	1,56(0,46-5,39)	0,513	37(33,9)	19(38,8)	1,23(0,61-2,48)	0,409	38(46,3)	18(23,7)	2,04(1,81-4,71)	0.022*
Age												
18 - 30	48(32,7)	1(9,1)	Ref	1	34(31,2)	15(30,6)	Ref	1	26(31,7)	23(30,3)	Ref	1
31 – 40	64(43,5)	7(63,6)	2,27(0,64-8,10)	0,130	50(45,9)	21(42,9)	0,89(0,45-1,75)	0,514	30(36,6)	41(53,9)	2,03(1,07-3,84)	0,643
41 - 50	27(18,4)	2(18,2)	0,99(0,20-4,83)	0,625	18(16,5)	11(22,4)	1,46(0,63-3,39)	0,532	20(24,4)	9(11,8)	0,47(0,18-0,98)	0,800
51 and above	8(5,4)	1(9,1)	1,74(0,20-15,30)	0,541	7(6,4)	2(4,1)	0,62(0.12-3,09)	>0.9	6(7,3)	3(3,9)	0,52(0.16-2.16)	0,800
Marital Status												
Single	84(57,1)	6(54,5)	Ref	1	62(56,9)	28(57,1)	Ref	1	44(53,7)	46(60,5)	Ref	1
Divorced	2(1,4)	0(0)	0,93(0,89-0,97)	>0.9	2(1,8)	0(0)	0,69(0,62-0,76)	0,501	1(1,2)	1(1,3)	1,08(0,07-17,6)	0,715
Married	61(41,5)	5(45,5)	1,08(1,03-1,12)	0,854	45(41,3)	21(42,9)	1,46(1,31-1,62)	0,034*	37(45,1)	29(38,2)	0,93(0,06-15,1)	0,531
Level of studies												
Primary	2(1,4)	0(0)	Ref	1	1(0,9)	1(2)	Ref	1	1(1,2)	1(1,3)	Ref	1
Secondary	42(28,6)	3(27,3)	0,94(0,24-3,71),	0,457	26(23,9)	19(38,8)	2,02(0,98-4,17)	0,314	16(19,5)	29(38,2)	2,54(1,24-5,21)	0,812
University	102(69,4)	8(72,7)	2,53(0,98-8,12)	0,089	81(74,3)	29(59,2)	0,50(0,25-1,02)	0,300	64(78,0)	46(60,5)	0,43(0,21-0,86)	0,602
Hospital service												
Laboratory department	15(10,2)	0(0)	Ref	1	10(9,2)	5(10,2)	Ref	1	9(11,0)	6(7,9)	Ref	1
Department of Surgery and Disciplinary	23(15,6)	1(9,1)	0,88(0,11-7,36)	>0.9	16(14,7)	8(16,3)	1,01(0,33-3,10)	>0.9	11(13,4)	8(10,5)	1,09(0,39-3,06)	0,813
Department of Gynecology	15(10,2)	1(9,1)	1,09(0,55-2,19)	0,601	11(10,1)	5(10,2)	0,42(0,09-2,0)	>0.9	7(8,5)	5(6,6)	0,76(0,23-2,49)	0,643
Department of Medicine	9(6,1)	3(27,3)	0,35(0,07-1,68)	0,173	10(9,2)	2(4,1)	5,73(1,29-24,4)	0,011*	2(2,4)	0(0)	1,84(0,96-3,54)	0,064

Department of care and services	17(11,6)	1(9,1)	0,77(0,09-3,35)	0,803	11(10,1)	7(14,3)	1,49(0,54-4,10)	0,625	7(8,5)	11(14,5)	1,81(0,66-4,95)	0,241
Department of emergencies-anesthesia and resuscitation	57(38,8)	2(18,2)	18(3,12-103,74)	0,000*	40(36,7)	19(38,8)	1,17(0,20-6,31)	0,874	7(8,5)	2(2,6)	0,53(0,09-2,96)	0,873
Department of Hygiene, Sanitation and Technology	3(2)	3(27,3)	0,54(0,07-4,42)	0,559	4(3,7)	2(4,1)	1,13(0,45-2,86)	>0.9	14(17,1)	10(13,2)	0,73(0,31-1,77)	0,493

4- Correlations Between Factors and Impact of Covid-19 on Psycho-Mental Health

Our results in patients organizational factors that may influence COVID19 on mental and socio-behavioural health showed that 60% of respondents who spoke of Personal protective equipment deficiency were stressed P = 0.004; 58.6% who spoke of the disruption of daily lifestyle of family and social activities were anxious P = 0.010. On COVID-19 work stress risk factors, 67.5% of respondents who spoke about fear of death were stressed, P = 0.003. As for the feeling since the COVID-19 pandemic confinement and lockdown measures showed that 97.7% of respondents said they were depressed in Cameroon (P = 0.002) (Table 6).

Table 6: Distribution of respondents on the Correlations between the factors, determinants and the impact of covid-19 on psycho-mental health in patients

Correlation analysis														
		PATIENT												
			ANXIETY				DEPRESSION				STRESS			
		Total	Anxious	Normal	OR (IC95%)	P-value	Depressive	Normal	OR (IC95%)	P-value	No	Yes	OR (IC95%)	P-value
		N=342	n=324	n=18			n=259	n=83			n=182	n=160		
		N(%)	n(%)	n(%)			n(%)	n(%)			n(%)	n(%)		
Organizational factors that may influence covid 19 on mental health														
Lack of water points and disinfectant in companies	No	153(44,7)	145(44,8)	8(44,4)	1,01(0,39-2,63)	0,980	112(43,2)	41(49,4)	0,78(0,48-2,28)	0,326	88(48,4)	65(40,6)	1,37(0,89-2,10)	0,152
	Yes	189(55,3)	179(55,2)	10(55,6)	Ref		147(56,8)	42(50,6)	Ref		94(51,6)	95(59,4)	Ref	
Lack of personal protective equipment	No	232(67,8)	222(68,5)	10(55,6)	1,74(0,67-4,52)	0,264	171(66)	61(73,5)	0,70(0,40)1,22)	0,205	136(74,7)	96(60)	1,97(1,24-3,12)	0,004*
	Yes	110(32,2)	102(31,5)	8(44,4)	Ref		88(34)	22(26,5)	Ref		46(25,3)	64(40)	Ref	
Upheaval of daily, family and social life	No	195(57)	190(58,6)	5(27,8)	3,68(1,28-10,58)	0,010*	152(58,7)	43(51,8)	1,32(0,80-2,17)	0,271	106(58,2)	89(55,6)	1,11(0,73-1,71)	0,626
	Yes	147(43)	134(41,4)	13(72,2)	Ref		107(41,3)	40(48,2)	Ref		76(41,8)	71(44,4)	Ref	
Reassignment of service posts	No	213(62,3)	201(62)	12(66,7)	0,82(0,30-2,23)	0,691	164(63,3)	49(59)	1,19(0,72-1,99)	0,483	107(58,8)	106(66,2)	0,73(0,47-1,13)	0,156
	Yes	129(37,7)	123(38)	6(33,3)	Ref		95(36,7)	34(41)	Ref		75(41,2)	54(33,8)	Ref	
Lack of care materials	No	255(74,6)	241(74,4)	14(77,8)	0,70(0,38-1,)	0,748	189(73)	66(79,5)	0,83(0,27-2,59)	0,233	136(74,7)	119(74,4)	1,02(0,63-1,66)	0,941
	Yes	87(25,4)	83(25,6)	4(22,2)	Ref		70(27)	17(20,5)	Ref		46(25,3)	41(25,6)	Ref	
Lack of communication between colleagues	No	276(80,7)	265(81,8)	11(61,1)	2,85(1,06-7,68)	0,047*	206(79,5)	70(84,3)	0,72(0,37-1,40)	0,335	148(81,3)	128(80)	1,09(0,64-1,86)	0,758
	Yes	66(19,3)	59(18,2)	7(38,9)	Ref		53(20,5)	13(15,7)	Ref		34(18,7)	32(20)	Ref	
Risk Factors associated to Anxiety and Depression														
The death of caregivers and the population	No	84(24,6)	77(23,8)	7(38,9)	2,32(0,79-6,82)	0,147	66(25,5)	18(21,7)	1,24(0,68-2,23)	0,484	49(26,9)	35(21,9)	1,31(0,80-2,16)	0,279
	Yes	258(75,4)	247(76,2)	11(61,1)	Ref		193(74,5)	65(78,3)	Ref		133(73,1)	125(78,1)	Ref	

The rapid spread of the Virus	No	145(42,4)	136(42)	9(50)	1,38(0,38-4,98)	0,503	104(40,2)	41(49,4)	0,69(0,42-1,13)	0,138	78(42,9)	67(41,9)	1,04(0,68-1,60)	0,854
	Yes	197(57,6)	188(58)	9(50)	Ref		155(59,8)	42(50,6)	Ref		104(57,1)	93(58,1)	Ref	
The fear of infecting his family and loved ones	No	287(83,9)	272(84)	15(83,3)	2,58(0,88-7,61)	0,945	216(83,4)	71(85,5)	0,85(0,42-1,70)	0,644	158(86,8)	129(80,6)	1,58(0,89-2,83)	0,12
	Yes	55(16,1)	52(16)	3(16,7)	Ref		43(16,6)	12(14,5)	Ref		24(13,2)	31(19,4)	Ref	
The severity of the virus	No	295(86,3)	282(87)	13(72,2)	1,05(0,39-3,74)	0,076	223(86,1)	72(86,7)	0,95(0,46-1,96)	0,882	160(87,9)	135(84,4)	1,35(0,73-2,50)	0,343
	Yes	47(13,7)	42(13)	5(27,8)	Ref		36(13,9)	11(13,3)	Ref		22(12,1)	25(15,6)	Ref	
Uncertain knowledge about the virus	No	298(87,1)	283(87,3)	15(83,3)	0,72(0,28-1,87)	0,621	225(86,9)	73(88)	0,91(0,43-1,93)	0,621	162(89)	136(85)	1,42(0,76-2,70)	0,269
	Yes	44(12,9)	41(12,7)	3(16,7)	Ref		34(13,1)	10(12)	Ref		20(11)	24(15)	Ref	
Post traumatic stress disorder	No	291(85,1)	278(85,8)	13(72,2)	0,49(0,18-1,31)	0,115	222(85,7)	69(83,1)	1,22(0,62-2,38)	0,115	160(87,9)	131(81,9)	1,61(0,88-2,93)	0,118
	Yes	51(14,9)	46(14,2)	5(27,8)	Ref		37(14,3)	14(16,9)	Ref		22(12,1)	29(18,1)	Ref	
Risk factor of stress														
Lack of support from those around him	No	142(41,5)	132(40,7)	10(55,6)	0,55(0,21-1,43)		110(42,5)	32(38,6)	1,18(0,71-1,95)	0,529	77(42,3)	65(40,6)	1,07(0,70-1,65)	0,753
	Yes	200(58,5)	192(59,3)	8(44,4)	Ref		149(57,5)	51(61,4)	Ref		105(57,7)	95(59,4)	Ref	
The fear of infecting relatives	No	207(60,5)	197(60,8)	10(55,6)	1,24(0,48-3,23)	0,658	156(60,2)	51(61,4)	0,95(0,57-1,58)	0,658	115(63,2)	92(57,5)	1,27(0,82-1,96)	0,283
	Yes	135(39,5)	127(39,2)	8(44,4)	Ref		103(39,8)	32(38,6)	Ref		67(36,8)	68(42,5)	Ref	
The high level of stress at work	No	244(71,3)	234(72,2)	10(55,6)	2,08(0,80-5,43)	0,128	185(71,4)	59(71,1)	1,02(0,59-1,76)	0,128	136(74,7)	108(67,5)	1,42(0,89-2,28)	0,14
	Yes	98(28,7)	90(27,8)	8(44,4)	Ref		74(28,6)	24(28,9)	Ref		46(25,3)	52(32,5)	Ref	
The fear of death	No	256(74,9)	242(74,7)	14(77,8)	0,84(0,27-2,63)	0,769	199(76,8)	57(68,7)	1,51(0,88-2,61)	0,136	148(81,3)	108(67,5)	2,10(1,27-3,45)	0,003*
	Yes	86(25,1)	82(25,3)	4(22,2)	Ref		60(23,2)	26(31,3)	Ref		34(18,7)	52(32,5)	Ref	
Isolation or social stigma	No	289(84,5)	276(85,2)	13(72,2)	2,21(0,75-6,48)	0,139	217(83,8)	72(86,7)	0,79(0,39-1,61)	0,516	155(85,2)	134(83,8)	1,11(0,62-2,00)	0,718
	Yes	53(15,5)	48(14,8)	5(27,8)	Ref		42(16,2)	11(13,3)	Ref		27(14,8)	26(16,2)	Ref	
Sensation since covid appearance														
No feeling	No	178(52)	169(52,2)	9(50)	1,09(0,42-2,82)	0,858	137(52,9)	41(49,4)	1,15(0,70-1,89)	0,579	19(10,4)	159(99,4)	0,01(0,0-0,1)	0,000*
	Yes	164(48)	155(47,8)	9(50)	Ref		122(47,1)	42(50,6)	Ref		163(89,6)	1(0,6)	Ref	
Stress	No	254(74,3)	239(73,8)	15(83,3)	0,56(0,16-1,99)	0,366	192(74,1)	62(74,7)	0,97(0,55-1,71)	0,918	182(100)	72(45)	0,28(0,23-0,35)	0,000*
	Yes	88(25,7)	85(26,2)	3(16,7)	Ref		67(25,9)	21(25,3)	Ref		0(0)	88(55)	Ref	
A little confused	No	270(78,9)	257(79,3)	13(72,2)	1,47(0,51-4,28)	0,472	201(77,6)	69(83,1)	0,70(0,37-1,34)	0,283	182(100)	88(55)	0,33(0,28-0,39)	0,000*
	Yes	72(21,1)	67(20,7)	5(27,8)	Ref		58(22,4)	14(16,9)	Ref		0(0)	72(45)	Ref	
Depressed	No	331(96,8)	314(96,9)	17(94,4)	1,84(0,22-15,28)	0,536	253(97,7)	78(94)	2,70(0,80-9,10)	0,002*	171(94)	160(100)	0,52(0,47-0,57)	0,096
	Yes	11(3,2)	10(3,1)	1(5,6)	Ref		6(2,3)	5(6)	Ref		11(6)	0(0)	Ref	
Consequence of COVID in the society														
Drop of ecomy	No	39(11,4)	36(11,1)	3(16,7)	0,63(0,17-2,26)	1	30(11,6)	9(10,8)	1,08(0,49-2,37)	1	15(8,2)	24(15)	0,51(0,26-1,01)	1
	Yes	288(88,9)	288(88,9)	15(83,3)	Ref	0,470	229(88,4)	74(89,2)	Ref	0,854	167(91,8)	136(85)	Ref	0,040*
Psychological disorders	No	201(58,8)	191(59)	10(55,6)	1,15(0,44-2,98	1	151(58,3)	50(60,2)	0,92(0,56-1,53)	1	120(65,9)	81(50,6)	1,89(1,22-2,92)	1
	Yes	141(41,2)	133(41)	8(44,4)	Ref	0,776	108(41,7)	33(39,8)	Ref	0,755	62(34,1)	79(49,4)	Ref	0,004*
Change in lifestyle	No	251(73,4)	241(74,4)	10(55,6)	2,32(0,88-6,08)	1	195(75,3)	56(67,5)	1,47(0,86-2,52)	1	136(74,7)	115(71,9)	1,16(0,72-1,87)	1
	Yes	91(26,6)	83(25,6)	8(44,4)	Ref	0,079	64(24,7)	27(32,5)	Ref	0,161	46(25,3)	45(28,1)	Ref	0,552
Suicide	No	326(95,3)	311(96)	15(83,3)	4,79(1,23-18,61)	1	246(95)	80(96,4)	0,71(0,20-2,55)	1	176(96,7)	150(93,8)	1,96(0,69-5,51)	1
	Yes	16(4,7	13(4)	3(16,7)	Ref	0,013*	13(5)	3(3,6)	Ref	0,598	6(3,3)	10(6,2)	Ref	0,197

Among health professional, On Organizational Factors That May Influence Covid19 on mental Health. Our results showed that 51% of respondents who spoke about Lack of water points and disinfectant in businesses / health facilities were Anxious P = 0.036. For stress risk factors 20.2% of respondents who spoke of the lack of support from those around them were depressed P = 0.05. Speaking of the consequences of COVID-19 in society 2.7% of our respondents who spoke about suicide were anxious P = 0.010 (Table 7).

Table 7: Distribution of respondents on the Correlations between the factors, determinants and the impact of covid-19 on psycho-mental health among health professional

		HEALTH PROFESSIONAL											
		Total	ANXIETY				DEPRESSION				STRESS			
			Anxious	Normal	OR (IC95%)	P-value	Depressive	Normal	OR (IC95%)	P-value	No	Yes	OR (IC95%)	P-value
		N=158	n=147	n=111			n=109	n=49			n=182	n=76		
		n(%)	n(%)	n(%)			n(%)	n(%)			n(%)	n(%)		
Organizational factors that may influence covid 19 on mental health														
Lack of water and disinfectant points in companies/ health facilities	No	77(48,7)	75(51)	2(18,2)	4,69(0,98-22,44)	0,036*	52(47,7)	25(51)	4,69(0,98-22,44)	0,7	38(46,3)	39(51,3)	0,82(0,44-1,53)	0,532
	Yes	81(51,3)	72(49)	9(81,8)	Ref		57(52,3)	24(49)	Ref		44(53,7)	37(48,7)	Ref	
Lack of personal protective equipment	No	42(26,6)	40(27,2)	2(18,2)	1,68(0,35-8,12)	0,513	24(22)	18(36,7)	1,68(0,35-8,12)	0,053	25(30,5)	17(22,4)	1,52(0,74-3,11)	0,248
	Yes	116(73,4)	107(72,8)	9(81,8)	Ref		85(78)	31(63,3)	Ref		57(69,5)	59(77,6)	Ref	
Disruption of daily, family and social life	No	84(53,2)	79(53,7)	5(45,5)	1,39(0,41-4,77)	0,595	55(50,5)	29(59,2)	1,39(0,41-4,77)	0,309	49(59,8)	35(46,1)	1,74(0,93-3,27)	0,085
	Yes	74(46,8)	68(46,3)	6(54,5)	Ref		54(49,5)	20(40,8)	Ref		33(40,2)	41(53,9)	Ref	
Reallocation of post service	No	76(48,1)	69(46,9)	7(63,6)	0,51(0,14-1,80)	0,285	52(47,7)	24(49)	0,51(0,14-1,80)	0,882	40(48,8)	36(47,4)	1,06(0,57-1,97)	0,859
	Yes	82(51,9)	78(53,1)	4(36,4)	Ref		57(52,3)	25(51)	Ref		42(51,2)	40(52,6)	Ref	
Lack of care materials	No	60(38)	55(37,4)	5(45,5)	0,72(0,21-2,46)	0,596	39(35,8)	21(42,9)	0,72(0,21-2,46)	0,397	29(35,4)	31(40,8)	0,79(0,42-1,51)	0,483
	Yes	98(62)	92(62,6)	6(54,5)	Ref		70(64,2)	28(57,1)	Ref		53(64,6)	45(59,2)	Ref	
Lack of communication between colleagues	No	111(70,3)	105(71,4)	6(54,5)	2,08(0,60-7,19)	0,237	74(67,9)	37(75,5)	2,08(0,60-7,20)	0,332	61(74,4)	50(65,8)	1,51(0,76-2,99)	0,237
	Yes	47(29,7)	42(28,6)	5(45,5)	Ref		35(32,1)	12(24,5)	Ref		21(25,6)	26(34,2)	Ref	
Risk Factors Associated to Anxiety and Depression														
The death of caregivers and the population	No	29(18,4)	26(17,7)	3(27,3)	0,57(0,14-2,31)	0,428	17(15,6)	12(24,5)	0,57(0,25-1,31)	0,182	15(18,3)	14(18,4)	0,99(0,44-2,22)	0,983
	Yes	129(81,6)	121(82,3)	8(72,7)	Ref		92(84,4)	37(75,5)	Ref		67(81,7)	62(81,6)	Ref	
Rapid spread of Virus	No	40(25,3)	36(24,5)	4(36,4)	0,57(0,16-2,05)	0,382	28(25,7)	12(24,5)	1,06(0,49-2,33)	0,873	20(24,4)	20(26,3)	0,90(0,44-1,85)	0,781
	Yes	118(74,7)	111(75,5)	7(63,6)	Ref		81(74,3)	37(75,5)	Ref		62(75,6)	56(73,7)	Ref	
The fear of infecting the family and loved ones	No	106(67,1)	100(68)	6(54,5)	1,77(0,52-6,12)	0,359	77(70,6)	29(59,2)	1,66(0,82-3,35)	0,156	59(72)	47(61,8)	1,58(0,81-3,09)	0,177
	Yes	52(32,9)	47(32)	5(45,5)	Ref		32(29,4)	20(40,8)	Ref		23(28)	29(38,2)	Ref	
The severity of the virus	No	99(62,7)	94(63,9)	5(45,5)	2,12(0,62-7,31)	0,221	67(61,5)	32(65,3)	0,85(0,41-1,71)	0,645	53(64,6)	46(60,5)	1,19(0,63-2,27)	0,594
	Yes	59(37,3)	53(36,1)	6(54,5)	Ref		42(38,5)	17(34,7)	Ref		29(35,4)	30(39,5)	Ref	
Uncertain knowledge about the virus	No	107(67,7)	100(68)	7(63,6)	1,22(0,34-4,36)	0,764	70(64,2)	37(75,5)	0,58(0,27-1,25)	0,16	57(69,5)	50(65,8)	1,19(0,61-2,31)	0,617
	Yes	51(32,3)	47(32)	4(36,4)	Ref		39(35,8)	12(24,5)	Rf		25(30,5)	26(34,2)	Ref	
Post traumatic stress disorder	No	118(74,7)	110(74,8)	8(72,7)	1,12(0,28-4,42)	0,877	77(70,6)	41(83,7)	0,47(0,20-1,12)	0,081	59(72)	59(77,6)	0,74(0,36-1,52)	0,412
	Yes	40(25,3)	37(25,2)	3(27,3)	Ref		32(29,4)	8(16,3)	Ref		23(28)	17(22,4)	Ref	
Risk factor for stress														
Lack of support from his surrounding	No	39(24,7)	36(24,5)	3(27,3)	0,87(0,22-3,44)	0,836	22(20,2)	17(34,7)	0,47(0,23-1,01)	0,050*	17(20,7)	22(28,9)	0,64(0,31-1,33)	0,231
	Yes	119(75,3)	111(75,5)	8(72,7)	Ref		87(79,8)	32(65,3)	Ref		65(79,3)	54(71,1)	Ref	
The fear of infecting the relative	No	91(57,6)	85(57,8)	6(54,5)	1,14(0,33-3,91)	0,832	59(54,1)	32(65,3)	0,63(0,31-1,26)	0,189	52(63,4)	39(51,3)	1,64(0,87-3,11)	0,124
	Yes	67(42,4)	62(42,2)	5(45,5)	Ref		50(45,9)	17(34,7)	Ref		30(36,6)	37(48,7)	Ref	
The high level of stress at work	No	89(56,3)	81(55,1)	8(72,7)	0,46(0,12-1,80)	0,256	57(52,3)	32(65,3)	0,58(0,29-1,17)	0,127	41(50)	48(63,2)	0,58(0,31-1,10)	0,096
	Yes	69(43,7)	66(44,9)	3(27,3)	Ref		52(47,7)	17(34,7)	Ref		41(50)	28(36,8)	Ref	
Fear of death	No	109(69)	104(70,7)	5(45,5)	2,90(0,84-10,02)	8,00%	77(70,6)	32(65,3)	1,28(0,62-2,62)	0,502	58(70,7)	51(67,1)	1,19(0,60-2,33)	0,622
	Yes	49(31)	43(29,3)	6(54,5)	Ref		32(29,4)	17(34,7)	Ref		24(29,3)	25(32,9)	Ref	
Isolation or social stigma	No	85(53,8)	80(54,4)	5(45,5)	1,43(0,42-4,90)	0,565	61(56)	24(49)	1,32(0,67-2,60)	0,415	43(52,4)	42(55,3)	0,89(0,48-1,67)	0,722
	Yes	73(46,2)	67(45,6)	6(54,5)	Ref		48(44)	25(51)	Ref		39(47,6)	34(44,7)	Ref	
Sensation of COVID appearance														
No feeling	No	80(50,6)	76(51,7)	4(36,4)	1,87(0,53-6,67)	0,326	56(51,4)	24(49)	1,10(0,56-2,16)	0,78	5(6,1)	75(98,7)	0,01(0,00-0,01)	0,000*
	Yes	78(49,4)	71(48,3)	7(63,6)	Ref		53(48,6)	25(51)	Ref		77(93,9)	1(1,3)	Ref	
Stressed	No	111(70,3)	103(70,1)	8(72,7)	0,88(0,22-3,47)	0,852	77(70,6)	34(69,4)	1,06(0,51-2,21)	0,873	82(100)	29(38,2)	-	0,000*
	Yes	47(29,7)	44(29,9)	3(27,3)	Ref		32(29,4)	15(30,6)	Ref		0(0)	47(61,8)		
A little confused	No	129(81,6)	118(80,3)	11(100)	-	0,103	88(80,7)	41(83,7)	0,82(0,33-2,00)	0,659	82(100)	47(61,8)	-	0,000*
	Yes	29(18,4)	29(19,7)	0(0)			21(19,3)	8(16,3)	Ref		0(0)	29(38,2)		
Depressed	No	155(98,1)	144(98)	11(100)	-	0,632	107(98,2)	48(98)	1,12(0,10-12,59)	0,93	79(96,3)	76(100)	-	0,092
	Yes	3(1,9)	3(2)	0(0)			2(1,8)	1(2)	Ref		3(3,7)	0(0)		
COVID consequence in society														

Drop of economy	No	9(5,7)	8(5,4)	1(9,1)	0,57(0,07-5,07)	1	6(5,5)	3(6,1)	0,89(0,21-3,72)	1	6(7,3)	3(3,9)	1,92(0,46-7, 97)	1
	Yes	149(94,3)	139(94,6)	10(90,9)	Ref	0,615	103(94,5)	46(93,9)	Ref	0,877	76(92,7)	73(96,1)	Ref	0,361
Psychological disorders	No	76(48,1)	73(49,7)	3(27,3)	2,63(0,67-10,30)	1	54(49,5)	22(44,9)	1,21(0,61-2,37)	1	43(52,4)	33(43,4)	1,44(0,77-2, 69)	1
	Yes	82(51,9)	74(50,3)	8(72,7)	Ref	0,152	55(50,5)	27(55,1)	Ref	0,589	39(47,6)	43(56,6)	Ref	0,257
Change in lifestyle	No	72(45,6)	70(47,6)	2(18,2)	4,09(0,85-18,59)	1	51(46,8)	21(42,9)	1,17(0,59-2,31)	1	40(48,8)	32(42,1)	1,31(0,70-2, 46)	1
	Yes	86(54,4)	77(52,4)	9(81,8)	Ref	0,059	58(53,2)	28(57,1)	Ref	0,646	42(51,2)	44(57,9)	Ref	0,400
Suicide	No	152(96,2)	143(97,3)	9(81,8)	7,94(1,28-49,33)	1	104(95,4)	48(98)	0,43(0,05-3,81)	1	79(96,3)	73(96,1)	1,08(0,21-5, 53)	1
	Yes	6(3,8)	4(2,7)	2(18,2)	Ref	0,010*	5(4,6)	1(2)	Ref	0,439	3(3,7)	3(3,9)	Ref	0,924

Discussion

The study reported an increasing prevalence of moderate symptoms on anxiety with 50% and low 50% on depression in patients, then severe symptoms on anxiety 30% and moderate on depression with 22% among healthcare workers. These results are contrary to that of a study by S. Li, Wang, et al which found a strong presence of symptoms of anxiety 41.8% and depression 42.8%, and found a degree severity 26.5% for anxiety and 33.1% for depression) [11]. This shows that healthcare workers experienced more anxiety, depression and stress unlike patients who were more stressed at the time of our study. The patients were stressed by the fear of dying, anxious by the upheaval of daily life, family and social. On the other hand, the health professional were anxious by the lack of water points and disinfectant in the health structures; depressed by the lack of support from those around them; stressed by the outbreak of COVID-19 in Cameroon.

The stress of COVID-19 pandemic and the response measures exacerbated the already high psychological suffering of health workers. The health system and the organization of healthcare have found themselves more disrupted among nurses in particular as the general population continues to be psychologically affected by this major health crisis disruption, supply chain rupture of protective equipment and lack of COVID-19 and palliative products. This suggests that COVID-19 continues to affect the mental and socio-behavioral health of patients and healthcare workers. Among these problems, COVID-19 and safety work stress was the most expressed manifestation 47.57%, followed by depression 29.63%, then anxiety 17.3% among health workers and 15.74% for stress, followed by of depression 9.85% and finally 7.84% for anxiety. Huang and Zhao estimated the overall prevalence of GAD (Generalized Anxiety Disorder) at 35.1%; that of depression 20.1% [12].

Age over 51 years old was a risk factor for depression, this is consistent with Lu et al., elderly people state of immunosuppression, is likely to develop depression [13]. Male sex was a risk factor for stress as Eléonore SOLE reported on the psychological effects of confinement in a meta-analysis that pointed out symptoms of post-traumatic stress, depression, anger, fear, drug abuse, but especially morale at half-mast in humans [14]. Leveraging on digital technology in improving early risk communication and community engagement is crucial, while promoting collaborative and inclusive working mental and socio-behavioural systems and equity in the emergency-intensive care and resuscitation department is crucial a risk factor for anxiety [15,16].

This underlines the need to take into account the effects of COVID-19 on the mental health of health professional and patients of the Laquintinie Hospital in Douala--Cameroon; which should result in the establishment of a psychological assistance and social protection support system [15,16]. We noted few limitations, as the study was conducted in only one referral hospital and no COVID-19 treatment center was considered. The modified WHO questionnaire could varied based on sociocultural and other factors where the mental health response programs is weak across Cameroon. Our findings could not be generalizable and benefits linked to facility-response improvements.

Conclusion

COVID-19 pandemic remains a major local and global health problem. It continues to have significant effects at different levels, and poses a significant threat to mental health. Our study reported that COVID-19 and work related anxiety, depression and stress rates were 17.3%, 29.63% and 47.57% among health professionals compared to anxiety, depression and stress rates of 7.84%, 9.85% and 15.74% in patients respectively. This requires taking into account the COVID 19 emergency confinement and lock-

down response interventions and measures have had significant mental and behavioural health effects on health professional and patients. We call on government and stakeholders to advocate and promote investment, ample and sustained financial allocation in the establishment facility- and community-based psychological and socio-behavioural change support system and social protection or insurance emergency policies and programs deployment, sufficient resources to curb the unprecedented immediate and long-term psychomental and health consequences.

Ethical Approval and Consent to Participle

All participants consented and approved prior engagement into the study

Consent for Publication

All authors read and approved the final version for publication

Data Availability

Additional data can be made available upon request.

Competing of Interest

Authors have no conflict interests.

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Author's Contributions

ET conceived the research topic. ET and NN modified, tested and adopted the contextual HADS protocol. NN conducted the field study and analyzed the data. ET and NN design the analytical plan and ET drafted of the manuscript. NN, BF, NTT, DT, ET and CJA improved the manuscript. All authors read and approved the final version.

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